water, which they fetch wholly from Springs, whereof the Country is ſo full, that there is not a houſe but hath one nigh the door.

Advertiſement concerning the Quantity of a Degree *of a Great Circle, in* Engliſh *meaſures.*

SOme while ſince an account was given * concerning the *Quantity of a Degree of a great Circle*, according to the tenour of a printed *French* Diſcourſe, entituled *De la Meſure de la Terre.* The Publiſher not then knowing what had been done of that nature here in *England*, but having been ſince directed to the peruſal of a Book, compoſed and publiſhed by that known Mathematician *Richard Norwood* in the year 1636, entituled *The Seaman's Practice*, wherein, among other particulars, the compaſs of the *Terraqueous Globe*, and the *Quantity of a Degree* in *Engliſh* meaſures are deliver'd, approaching very near to that, which hath been lately obſerv'd in *France*; he thought, it would much conduce to mutual confirmation, in a ſummary Narrative to take publick notice here of the method uſed by the ſaid *Engliſh* Mathematician, and of the reſult of the ſame; which, in ſhort, is as follows:

* *See* N. 112, *and* N. 124 *of theſe Tranſ.*

A. 1635 the ſaid Mr. *Norwood*, Reader of the Mathematicks in *London*, obſerv'd, as exactly as he could, the Summer-Solſtitial Meridian Altitude of the Sun in the middle of the City of *York*, by an Arch of a Sextant of more than five foot *radius*, and found it to be 59 *deg.* 33'. And formerly (*vid. A.* 1633.) he had obſerv'd the like Altitude in the City of *London* near the *Tower* to be 62 *deg.* 1'. Whereupon he actually meaſured, for the moſt part, the way from *York* to *London* with Chains, and where he meaſur'd not, he paced it, (wherein, *he ſaith*, through cuſtom he uſually came very near the truth;) obſerving all the way he came, with a *Circumferentor*, all the principal Angles of poſition or windings of the way, with a competent allowance for other leſſer Windings, Aſcents and Deſcents; not laying theſe down by a *Protractor* after the uſual manner, but framing a *Table* much exacter and fitter for this purpoſe; as may be ſeen in the *Engliſh* book it ſelf. And by this Method and Meaſure he found the Parallel of *York* from that of *London* to be 9149 chains, every chain being ſix poles or ninety nine feet, 16½ *Engliſh* feet to a Pole. Now, theſe 9149 Chains being equal to 2 *deg.* 28'. (the aforeſaid Latitude between thoſe two Cities) a little calculation makes it appear, that *one Degree* of a Great Circle, meaſured on the Earth, is 367196 of our feet, *numero rotundo* 367200, or 22254 Poles; which make 556 Furlongs and 14 Poles,

14 Poles, or 69½ *Engliſh* miles and 14 Poles; 8 Furlongs to a mile, and 40 Poles to a Furlong. Which being compared to that meaſure of a Degree, which is deliver'd in the above-mention'd *French* Diſcourſe, will be found to come very near it, they finding 73 miles *ferè*, at 5000 feet to an *Engliſh* mile, which make 365000 feet; whereas the 69½ *Engliſh* miles and 14 Poles, found by Mr. *Norwood*, amount to 367200 feet, reckoning 5280 feet to an *Engliſh* mile, as the true meaſure of it is; whence the difference between theſe two meaſures appears to be no more than 2200 feet, which is not half an *Engliſh* mile by 440 feet.

If any one deſire to know further the whole *Circumference*, as alſo the *Diameter* and *Semidiameter* of the ſaid Terraqueous Globe, according to this meaſure, he will eaſily find,

The Circumference to be	25056 *ferè*.
The Diameter,	7966
The Semidiameter,	3983

Obſervations made of the late Solar Eclipſe on the firſt of June, 1676. ſt. v.

One, by *Francis Smethwick* Eſquire, as followeth:

Initium defectionis Weſtmonaſterii *h.* 7. 50'. } *poſt med. noctem*
Finis, *h* 9. 54¾'. } Junii 1. 1676.
Totius Eclipſis duratio, horæ 2. 4'¾.

Tempus obſervatum fuit cum horologio oſcillitario, vibrante minuta ſecunda, & correcto per obſervationes. Tubus adhibitus fuit bonæ notæ, pedum 7½.

The other, by Mr. *Colſon* at *Wapping*, near *London*, as followeth;

Temp. juxta horol. oſcill.	*Phaſes.*	*Solis alt.*	*Tempus correct. ex altit.*	
h. ′ ″		° ′	h. ′ ″	
7.34.50		22.46	7.36. 0	
7.37.14		33.10	7.38.40	
7.39.10	dig.	33.30	7.40.48	
7.50.40	¼	——	7.51.51	*Tubo optico æſtim.*
dub. 8. 8.34	1¼	——	8. 9.45	*Tubo optico menſur.*
8.17.25	2¼	——	8.18.36	
8.27.10	3¼	——	8.28.21	
9.39.—	1½	——	9.40.—	*Tubo æſtim.*
9.43.—	1¾	——	9.44.—	
9.48.—	¾	——	9.49.—	
9.54.25	*non finita*	——	9.55.36	
9.55.55	*finita.*	——	9.57. 6	
4.26. 5	*Solis alt.*	32.10	4.26.56	
4.28.58		31.53	4.29.52	
4.31. 21		31.31	4.32.16	